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## RAW SEQUENCE LISTING

DATE: 03/18/2002

PATENT APPLICATION: US/09/881,572A

TIME: 15:21:11

Input Set : A:\601-1-095N.txt

Output Set: N:\CRF3\03182002\I881572A.raw

3 <110> APPLICANT: Roth, Monica;  
 4 Bupp, Keith;  
 5 University of Medicine and Dentistry of New Jersey  
 7 <120> TITLE OF INVENTION: Targeting Viral Vectors to Specific Cells  
 9 <130> FILE REFERENCE: 601-1-095  
 11 <140> CURRENT APPLICATION NUMBER: 09/881,572A  
 C--> 12 <141> CURRENT FILING DATE: 2002-03-05  
 14 <150> PRIOR APPLICATION NUMBER: 60/212,239  
 15 <151> PRIOR FILING DATE: 2000-06-16  
 17 <160> NUMBER OF SEQ ID NOS: 27  
 19 <170> SOFTWARE: PatentIn version 3.0  
 21 <210> SEQ ID NO: 1  
 22 <211> LENGTH: 65  
 23 <212> TYPE: PRT  
 24 <213> ORGANISM: moloney murine leukemia virus  
 26 <400> SEQUENCE: 1  
 28 His Gly Pro Ser Tyr Trp Gly Leu Glu Tyr Gln Ser Pro Phe Ser Ser  
 29 1 5 10 15  
 30 Pro Pro Gly Pro Pro Cys Cys Ser Gly Gly Ser Ser Pro Gly Cys Ser  
 31 20 25 30  
 32 Arg Asp Cys Glu Glu Pro Leu Thr Ser Leu Thr Pro Arg Cys Asn Thr  
 33 35 40 45  
 34 Ala Trp Asn Arg Leu Lys Leu Asp Gln Thr Thr His Lys Ser Asn Glu  
 35 50 55 60  
 36 Gly  
 37 65  
 39 <210> SEQ ID NO: 2  
 40 <211> LENGTH: 11  
 41 <212> TYPE: PRT  
 42 <213> ORGANISM: moloney murine leukemia virus  
 44 <400> SEQUENCE: 2  
 46 Ser Asp Gln Ala Val Gln Val Cys Lys Asp Asn  
 47 1 5 10  
 49 <210> SEQ ID NO: 3  
 50 <211> LENGTH: 9  
 51 <212> TYPE: PRT  
 52 <213> ORGANISM: moloney murine leukemia virus  
 54 <400> SEQUENCE: 3  
 56 Pro His Arg Pro Arg Glu Ser Lys Ser  
 57 1 5  
 59 <210> SEQ ID NO: 4  
 60 <211> LENGTH: 29  
 61 <212> TYPE: PRT

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62 <213> ORGANISM: amphotropic murine leukemia virus
64 <400> SEQUENCE: 4
66 Glu Glu Trp Asp Pro Ser Asp Gln Glu Pro Tyr Val Gly Tyr Gly Cys
67 1          5          10          15
68 Lys Tyr Pro Ala Gly Arg Gln Arg Thr Arg Thr Phe Asp
69          20          25
71 <210> SEQ ID NO: 5
72 <211> LENGTH: 30
73 <212> TYPE: PRT
74 <213> ORGANISM: amphotropic murine leukemia virus
76 <400> SEQUENCE: 5
78 Pro Trp Asp Thr Gly Cys Ser Lys Val Ala Cys Gly Pro Cys Tyr Asp
79 1          5          10          15
80 Leu Ser Lys Val Ser Asn Ser Phe Gln Gly Ala Thr Arg Gly
81          20          25          30
83 <210> SEQ ID NO: 6
84 <211> LENGTH: 6
85 <212> TYPE: PRT
86 <213> ORGANISM: amphotropic murine leukemia virus
88 <400> SEQUENCE: 6
90 His Thr Val Lys Ser Gly
91 1          5
93 <210> SEQ ID NO: 7
94 <211> LENGTH: 39
95 <212> TYPE: PRT
96 <213> ORGANISM: Feline leukemia virus
98 <400> SEQUENCE: 7
100 Asp Thr Trp Glu Pro Ile Val Leu Asn Pro Thr Asn Val Lys His Gly
101 1          5          10          15
102 Ala Arg Tyr Ser Ser Ser Lys Tyr Gly Cys Lys Thr Thr Asp Arg Lys
103          20          25          30
104 Lys Gln Gln Gln Thr Tyr Pro
105          35
107 <210> SEQ ID NO: 8
108 <211> LENGTH: 6
109 <212> TYPE: PRT
110 <213> ORGANISM: Feline Leukemia Virus
112 <400> SEQUENCE: 8
114 Gln Asp Asn Ser Cys Glu
115 1          5
117 <210> SEQ ID NO: 9
118 <211> LENGTH: 11
119 <212> TYPE: PRT
120 <213> ORGANISM: Feline Leukemia Virus
122 <400> SEQUENCE: 9
124 His Ala Pro Ser Leu Gly Pro Lys Gly Thr His
125 1          5          10
127 <210> SEQ ID NO: 10
128 <211> LENGTH: 21

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Input Set : A:\601-1-095N.txt

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129 <212> TYPE: PRT
130 <213> ORGANISM: Rat Leukemia Virus
132 <400> SEQUENCE: 10
134 Asp Ser Trp Glu His Thr Glu Arg Thr Pro His Asn Ser Tyr Pro Pro
135 1          5          10          15
136 Cys Arg His Ser Asp
137          20
139 <210> SEQ ID NO: 11
140 <211> LENGTH: 6
141 <212> TYPE: PRT
142 <213> ORGANISM: Rat Leukemia Virus
144 <400> SEQUENCE: 11
146 Gly Lys Arg Thr Arg Glu
147 1          5
149 <210> SEQ ID NO: 12
150 <211> LENGTH: 24
151 <212> TYPE: PRT
152 <213> ORGANISM: Feline Leukemia Virus
154 <400> SEQUENCE: 12
156 Trp Glu Pro Ile Val Leu Asp Pro Thr Asn Val Lys His Gly Ala Arg
157 1          5          10          15
158 Tyr Pro Ser Ser Lys Tyr Gly Cys
159          20
161 <210> SEQ ID NO: 13
162 <211> LENGTH: 21
163 <212> TYPE: PRT
164 <213> ORGANISM: Feline Leukemia Virus
166 <400> SEQUENCE: 13
168 Trp Glu Pro Met Ala Pro Asp Pro Arg Ser Trp Ala Arg Tyr Ser Ser
169 1          5          10          15
170 Ser Ile His Gly Cys
171          20
173 <210> SEQ ID NO: 14
174 <211> LENGTH: 21
175 <212> TYPE: PRT
C--> 176 <213> ORGANISM: Artificial
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Consensus Sequence
181 <220> FEATURE:
182 <221> NAME/KEY: Variant
183 <222> LOCATION: (10) through (14)
184 <223> OTHER INFORMATION: Xaa is any amino acid.
186 <220> FEATURE:
187 <221> NAME/KEY: Variant
188 <222> LOCATION: (4) through (8)
189 <223> OTHER INFORMATION: Xaa is any amino acid.
191 <400> SEQUENCE: 14
W--> 193 Trp Glu Pro Xaa Xaa Xaa Xaa Xaa Arg Xaa Xaa Xaa Xaa Xaa Ser Ser
194 1          5          10          15

```

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```

195 Ser Lys Tyr Gly Cys
196      20
198 <210> SEQ ID NO: 15
199 <211> LENGTH: 14
200 <212> TYPE: PRT
201 <213> ORGANISM: Amphotropic Murine Leukemia Virus
203 <400> SEQUENCE: 15
205 Glu Glu Trp Asp Pro Ser Asp Gln Glu Pro Tyr Val Gly Tyr
206 1      5      10
208 <210> SEQ ID NO: 16
209 <211> LENGTH: 13
210 <212> TYPE: PRT
211 <213> ORGANISM: Amphotropic Murine Leukemia Virus
213 <400> SEQUENCE: 16
215 Pro Trp Asp Thr Gly Cys Ser Lys Val Ala Cys Gly Pro
216 1      5      10
218 <210> SEQ ID NO: 17
219 <211> LENGTH: 29
220 <212> TYPE: PRT
221 <213> ORGANISM: Amphotropic Murine Leukemia Virus
223 <400> SEQUENCE: 17
225 Val Gly Asp Thr Trp Glu Pro Ile Val Leu Asn Pro Thr Asn Val Lys
226 1      5      10      15
227 His Gly Ala Arg Tyr Ser Ser Ser Lys Tyr Gly Cys Lys
228      20      25
230 <210> SEQ ID NO: 18
231 <211> LENGTH: 26
232 <212> TYPE: PRT
233 <213> ORGANISM: Feline Leukemia Virus
235 <400> SEQUENCE: 18
237 Val Gly Thr Asp Trp Glu Pro Met Ala Pro Asp Pro Arg Ser Trp Ala
238 1      5      10      15
239 Arg Tyr Ser Ser Ser Thr His Gly Cys Lys
240      20      25
242 <210> SEQ ID NO: 19
243 <211> LENGTH: 19
244 <212> TYPE: PRT
245 <213> ORGANISM: Feline Leukemia Virus
247 <400> SEQUENCE: 19
249 Val Gly Glu Glu Trp Asp Pro Ser Asp Gln Glu Pro Tyr Val Gly Tyr
250 1      5      10      15
251 Gly Cys Lys
254 <210> SEQ ID NO: 20
255 <211> LENGTH: 72
256 <212> TYPE: DNA
C--> 257 <213> ORGANISM: Artificial
259 <220> FEATURE:
260 <223> OTHER INFORMATION: example of variable insertion site
262 <220> FEATURE:

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Input Set : A:\601-1-095N.txt

Output Set: N:\CRF3\03182002\I881572A.raw

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263 <223> OTHER INFORMATION: n is any nucleotide.
265 <220> FEATURE:
266 <221> NAME/KEY: Variant
267 <222> LOCATION: (22) through (36)
268 <223> OTHER INFORMATION: n is any nucleotide.
270 <220> FEATURE:
271 <221> NAME/KEY: Variant
272 <222> LOCATION: (40) through (54)
273 <223> OTHER INFORMATION: n is any nucleotide.
275 <400> SEQUENCE: 20
W--> 276 gtgggagaca cctgggaacc tnnnnnnnnn nnnnnnagan nnnnnnnnnn nnnntcctcc 60
277 tcaaaatatg ga 72
280 <210> SEQ ID NO: 21
281 <211> LENGTH: 17
282 <212> TYPE: DNA
283 <213> ORGANISM: Feline Leukemia Virus
285 <400> SEQUENCE: 21
286 ctctgtggac ccttgga 17
289 <210> SEQ ID NO: 22
290 <211> LENGTH: 22
291 <212> TYPE: DNA
292 <213> ORGANISM: Feline Leukemia Virus
294 <400> SEQUENCE: 22
295 aggaggagtt ttatacctac at 22
298 <210> SEQ ID NO: 23
299 <211> LENGTH: 25
300 <212> TYPE: PRT
301 <213> ORGANISM: Homo sapiens
303 <220> FEATURE:
304 <221> NAME/KEY: Variant
305 <222> LOCATION: (4) through (6)
306 <223> OTHER INFORMATION: Xaa is any amino acid.
308 <220> FEATURE:
309 <221> NAME/KEY: Variant
310 <222> LOCATION: (17) through (19)
311 <223> OTHER INFORMATION: Xaa is any amino acid.
313 <400> SEQUENCE: 23
W--> 315 Trp Glu Pro Xaa Xaa Xaa Ser Pro Tyr Ser Ser Asp Thr Thr Pro Ala
316 1 5 10 15
W--> 317 Xaa Xaa Xaa Ser Ser Lys Tyr Gly Cys
318 20 25
320 <210> SEQ ID NO: 24
321 <211> LENGTH: 25
322 <212> TYPE: PRT
323 <213> ORGANISM: Amphotropic Murine Leukemia Virus
325 <400> SEQUENCE: 24
327 Glu Glu Trp Asp Pro Ser Asp Gln Glu Pro Tyr Val Gly Tyr Gly Cys
328 1 5 10 15
329 Lys Tyr Pro Ala Gly Arg Gln Arg Thr

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## VERIFICATION SUMMARY

DATE: 03/18/2002

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TIME: 15:21:12

Input Set : A:\601-1-095N.txt

Output Set: N:\CRF3\03182002\I881572A.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:176 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:14  
L:193 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:257 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:20  
L:276 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:315 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23  
L:317 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23